



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/221,789	12/28/98	REEH	GR96P1650

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EXAMINER

JACKSON JR, J

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 07/15/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

221789

Applicant(s)

Reeh

Examiner

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Group Art Unit

2815

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-33 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-33 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2815

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12,14-16,24-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tadatsu '609.

Tadatsu teaches an ultraviolet-blue light emitting diode surrounded by a resin including a fluorescent material which emits a different wavelength. The total structure emits polychromatic radiation. Applicant's claims are anticipated or obvious over '609. Claim 3 is rejected because there is luminescent material substantially "downstream" from the main radiating direction of the semiconductor device. Claim 4 is rejected because the luminescent resin can be considered a "layer". The language is broad and undistinguishing over '309. Claim 7 is rejected because the 370nm emission of the '609 device is ultraviolet. Claims 8 and 9 are rejected because the '609

Art Unit: 2815

device emits white light. Claim 11 is rejected because the luminescent resin is disposed on the housing "recess". Claims 14-16 are rejected because '609 teaches organic dyes and resin mold. The claimed resins are obvious plastic materials in the art. Claims 24-26 are rejected because '609 teaches organic dye molecules which may be labeled "light-diffusing particles". Claims 31-33 are obvious applications of the Tadatsu device.

4. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadatsu in view of Geusic '055, Mita '881, and Pinnow '482.

Geusic teaches a similar device and shows layers of encapsulating material with different luminescent properties. Likewise Mita shows encapsulating layers with different luminescent properties. It would have been obvious to have practiced layers of different encapsulating materials in Tadatsu to improve the emission properties. Claim 13 is obvious structure. Claims 17-33 are obvious because Geusic and Mita teach and suggest inorganic phosphor materials which are examples of obvious phosphors in the art. Note also Mita teaches 10 micron particle size which is effective as a diffusing agent. Pinnow teaches YAG:Ce phosphor. Applicant's recited phosphor materials are well known and obvious to one of ordinary skill in view of the teachings of Tadatsu, Mita, Pinnow, and Geusic.

5. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadatsu in view of Mita, Pinnow, and Geusic, and further in view of Sato et al and Chao et al.

In regard to applicant's claims reciting different layers, Sato teaches multiple layers of phosphor materials to emit a multiple of wavelengths for white light emission. It would have been

Art Unit: 2815

obvious to have practiced multiple layers of phosphors in the prior art to emit white light. In regard to any claims reciting inorganic phosphors in a glass matrix Chao teaches and suggests the same for an emission device as Tadatsu to allow white light emission. Applicant's claims are obvious structure.

6. Claims 1-4, 6-10, 13, 17, 21-23, 25, 26, 28-33 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Abe '230.

Abe shows a light emitting diode in an arrangement with wavelength conversion fluors for emission of white light. Applicant's claims are anticipated or obvious over Abe.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Tokailin '214.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson whose telephone number is (703) 308-4937. The examiner can normally be reached on from to .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, , can be reached on (703) . The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Jerome Jackson, Jr.
Primary Examiner